

REMARKS

In view of the Advisory Action dated March 12, 2010, Applicant requests entry of this Supplemental Amendment in addition to the Amendment filed on February 22, 2010.

Applicant respectfully requests reconsideration. Claims 1-4, 7-8, and 16-20 were previously pending in this application. Claims 1 and 18 have been amended. As a result, claims 1-4, 7-8, and 16-20 are pending for examination with claims 1 and 18 being independent claims. No new matter has been added.

Prior Art Rejections

Claims 1-5 and 7 stand rejected under 35 U.S.C. §102(e) as purportedly being anticipated by Sugnaux (U.S. Patent Publication No. 2004/0131934). Claims 8, 18 and 19 stand rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over Sugnaux. Claims 16 and 20 stand rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over Sugnaux in view of Ishibashi (JP 2003021410). Claim 17 stands rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over Sugnaux in view of Yamakawa (U.S. Patent No. 6,656,633).

Sugnaux is directed to electrochemical cells that employ non-aqueous organic electrolyte, solid polymer electrolyte, and porous electrode materials.

Independent claims 1 and 18 have been amended to recite that “the metal is either a pure metal or an alloy metal comprising at least one metal selected from the group consisting of Pt, Ru, Co, Ti, Ni, Al and Au.” Support for these amendments can be found, at least, in paragraph [0024] of the published application.

The Office Action of December 30, 2009 points to Examples 3, 4, and 5 of Sugnaux to allegedly disclose a metal that is selected from the group consisting of Pt, Ru, Co, Ti, Ni, Al and Au. The claims, as amended, distinguish over Sugnaux.

Example 3 of Sugnaux teaches loading of a coating solution on to a transparent carrier where the coating includes TiO₂. Example 4 of Sugnaux describes incorporation of Al₂O₃ into a coating solution. Example 5 of Sugnaux teaches of negative and positive electrodes that are composed of TiO₂/LiCoO₂. Each of the Examples relied upon by the Office Action incorporate the usage of

metal oxide materials, rather than metals. In contrast, independent claim 1 includes a metal that is selected from a group consisting of Pt, Ru, Co, Ti, Ni, Al and Au, *none of which are metal oxides*.

Advisory Action

The Advisory Action of March 12, 2010 states that the request for reconsideration has been considered but does not place the application in condition for allowance. In particular, the Advisory Action asserts that the Sugnaux reference should be used as a whole and refers to paragraphs [0053] and [0055] of Sugnaux to allegedly teach the use of most, if not all, of the metals claimed.

Sugnaux does not disclose a mixture of carbon carrying both a metal and a binder where the metal is either a pure metal or an alloy metal comprising at least one metal selected from the group consisting of Pt, Ru, Co, Ti, Ni, Al and Au.

Paragraph [0053] of Sugnaux provides no more than a general listing of possible electronic conductive materials that may be blended or substituted with a curable organic binder. There is no disclosure, specifically, of pure or alloyed metals that are selected from the group consisting of Pt, Ru, Co, Ti, Ni, Al and Au. In fact, there is no mention anywhere in Sugnaux of these particular metals for providing a mixture of carbon carrying both a binder and one of the above claimed metals.

Although paragraph [0055] of Sugnaux mentions the usage of non-transition or transition metals selected from the group consisting of Group IB, IIB, IIIA, IVA, IVB, VA, VB, VIIB, VIIIB and VIII elements in an electrode active material, such metals are not provided as pure or alloyed metals for incorporation into a mixture of carbon carrying a binder and one of the metals. Instead, taking the full teaching of Sugnaux, paragraph [0055] refers to the atoms of non-transition or transition metals of Sugnaux in the context of being lithiated or incorporated into a thiocyanic acid compound (see paragraph [0049] of Sugnaux). In other words, Sugnaux discloses no more than inclusion of a compound that contains metal atoms (e.g., ionically bound in an acid) in an electrode.

In contrast, the current claims provide for a pure metal or alloyed metal that includes a metal selected from the group consisting of Pt, Ru, Co, Ti, Ni, Al and Au. For example, metal elements are bound to one another through metallic bonds and mixed with carbon and a binder. Indeed, the

metals of Sugnaux are not mixed with carbon and binder in a pure metallic form, but instead, are incorporated into the electrode as part of a larger molecular compound.

Because Sugnaux does not disclose a metal being either a pure metal or an alloy metal comprising at least one metal selected from the group consisting of Pt, Ru, Co, Ti, Ni, Al and Au, the rejections of independent claims 1 and 18 should be withdrawn. The rejections of claims 2-4, 7-8, and 16-17 which depend from claim 1; and the rejections of claims 19 and 20 which depend from claim 18 should also be withdrawn.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. S1459.70092US00.

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Respectfully submitted,

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